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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,337	11/26/2001	Joseph David Chiodo	15-263C1	1398

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INTELLECTUAL PROPERTY DEPARTMENT  
DEWITT, ROSS & STEVENS, S.C.  
8000 Excelsior Drive  
suite 401  
Madison, WI 53717-2100

EXAMINER

FERGUSON, MICHAEL P

ART UNIT	PAPER NUMBER
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3679

DATE MAILED: 12/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/994,337

Applicant(s)

CHIODO ET AL. 

Examiner

Michael P. Ferguson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 October 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 65-76 and 93-103 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 65-76 is/are allowed.
- 6) ☒ Claim(s) 93-97 and 99-103 is/are rejected.
- 7) ☒ Claim(s) 98 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 93-95 and 101-103 are rejected under 35 U.S.C. 102(b) as being anticipated by Lortz et al. (US 5,722,709).

As to claim 93, Lortz et al. disclose an assembly for an article comprising:

first **12** and second **18** portions fastenable together by a releasable fastener device secured to one of the first and second portions;

wherein the releasable fastener device is defined by a female element **16** formed of shape memory material, the female element being engageable with a threaded male element **17** (via threaded segments **14**), the female element including a female engagement region able to grip a threaded male engagement region of a male element **17**, the female engagement region being operative upon shape transition to change from a firm radially tensioned form to a relaxed untensioned form;

wherein the change of form of the female engagement region is arranged to radially move the female engagement region clear of the male engagement region so as to release the engagement between the male element and the female element and leave the male element free to withdraw from the female element without having to be unscrewed therefrom (Figures 1 and 2).

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As to claim 94, Lortz et al. disclose an assembly for an article comprising first **12** and second **18** portions fastenable together by a releasable fastener device secured to one of the first and second portions, the releasable fastener device being defined by a female element **16**:

including a female engagement region having an inner space wherein a male element **17** may be received (via threaded segments **14**), and

being formed of shape memory material,

wherein the female engagement region, upon shape transition, changes between:

a radially tensioned form wherein the male element is closely receive within the inner space with the female engagement region gripping the outer surface of the male element, and

a relaxed form wherein the male element is withdrawable without interference from the inner space of the female element (Figures 1 and 2).

As to claim 95, Lortz et al. disclose an assembly wherein the inner space changes its shape configuration upon shape transition.

As to claim 101, Lortz et al. disclose an assembly wherein the outer surface of the male element **17** is threaded (Figure 1).

As to claim 102, Lortz et al. disclose an assembly wherein the shape memory material is a shape memory polymer.

As to claim 103, Lortz et al. disclose an assembly wherein:

the inner space is defined by an elongated passage, and

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the female element 16 defines an annular member extending about the inner space, and wherein the length of the passage is substantially greater than the thickness of the annular member defined between the inner space and the outer surface of the annular member (Figures 1 and 2).

3. Claims 94-97 and 99-103 are rejected under 35 U.S.C. 102(b) as being anticipated by Popov (RU 2011045).

As to claim 94, Popov discloses an assembly for an article comprising first and second portions fastenable together by a releasable fastener device secured to one of the first and second portions, the releasable fastener device being defined by a female element 2:

including a female engagement region having an inner space wherein a male element 1 may be received, and

being formed of shape memory material,

wherein the female engagement region, upon shape transition, changes between:

a radially tensioned form wherein the male element is closely receive within the inner space with the female engagement region gripping the outer surface of the male element, and

a relaxed form wherein the male element is withdrawable without interference from the inner space of the female element (Figures 1, 4 and 7).

As to claim 95, Popov discloses an assembly wherein the inner space changes its shape configuration upon shape transition (Figures 4 and 7).

As to claim 96, Popov discloses an assembly wherein the inner space, upon shape transition, changes between a substantially circular cross-section and a noncircular cross-section (Figures 4 and 7).

As to claim 97, Popov discloses an assembly wherein the inner space, upon shape transition, changes between a substantially circular cross-section and a substantially oval cross-section (Figures 4 and 7).

As to claim 99, Popov discloses an assembly wherein the inner space is threaded (Figure 1).

As to claim 100, Popov discloses an assembly wherein the outer surface of the male element 1 is threaded (Figure 1).

As to claim 101, Popov discloses an assembly wherein the outer surface of the male element 1 is threaded (Figure 1).

As to claim 102, Popov discloses an assembly wherein the shape memory material is a shape memory polymer.

As to claim 103, Popov discloses an assembly wherein:  
the inner space is defined by an elongated passage, and  
the female element 2 defines an annular member extending about the inner space, and wherein the length of the passage is substantially greater than the thickness of the annular member defined between the inner space and the outer surface of the annular member (when deformed; Figures 1 and 7).

***Allowable Subject Matter***

4. Claims 65-76 are allowed.

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5. The following is a statement of reasons for the indication of allowable subject matter:

As to claim 65, Lortz et al. disclose the claimed article with the exception of wherein the releasable fastener device comprises shape memory material and is in the form of a female element threadedly engaged with a complementary male element through a first threaded engagement region of the shape memory material provided on one of the female element and the male element.

It would not have been obvious to one having ordinary skill in the art at the time the invention was made to modify an article as disclosed by Lortz et al. to have the above mentioned elements as the prior art neither teaches nor suggests such modifications.

6. Claim 98 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

As to claim 98, Popov discloses the claimed assembly with the exception of wherein the inner space is defined by an elongated passage, and wherein the length of the passage changes upon shape transition, with the female element urging the male element from the inner space when transitioning from the tensioned form to the relaxed form.

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It would not have been obvious to one having ordinary skill in the art at the time the invention was made to modify an assembly as disclosed by Popov to have the above mentioned elements as the prior art neither teaches nor suggests such modifications.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Ferguson whose telephone number is (703)308-8591. The examiner can normally be reached on M-F (7:30-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (703)308-2686. The fax phone



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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
MPF  
11/30/04



DANIEL P. STODOLA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600